EXECUTIVE SUMMARY

PROJECT TITLE: **MERCED RIVER CORRIDOR RESTORATION PLAN**

APPLICANTS: **Stillwater Sciences and Merced County Planning and Community Development Department**

PROJECT DESCRIPTION AND PRIMARY BIOLOGICAL/ECOLOGICAL OBJECTIVES: The goal of this project is to develop a public-supported, technically sound, and implementable restoration plan for the Merced River corridor from Crocker-Huffman Dam (RM 52) downstream to the San Joaquin River (RM 0). The plan will focus on reestablishing geomorphic and ecological functions, processes, and characteristics given contemporary regulated flow and sediment conditions in the Merced River to reverse long-term trends of degradation and improve habitats from existing conditions. This project will be implemented in three phases: (I) establish a Merced River Stakeholder Group and Technical Advisory Committee (TAC), (II) analyze and quantify current in-channel, riparian, and floodplain conditions and processes, and (III) synthesize input from the Stakeholder Group and TAC (Phase I) and results of the geomorphic and ecological analysis (Phase II) to develop a Merced River corridor restoration and monitoring plan. Phase I will continue throughout Phases II and III of the project. This phase will likely be funded by the Anadromous Fisheries Restoration Program (AFRP). A final funding decision is anticipated in July 1998. **This proposal seeks funding for Phase II, Phase III and, in the event that AFRP funding is not approved, Phase I.**

APPROACH, TASKS, AND SCHEDULE: Public and stakeholder support and participation will provide a foundation for this project. The Merced County Planning and Community Development Department is convening a Stakeholder Group and a Technical Advisory Committee (TAC). The Stakeholder Group will represent a broad array of public and private interests, providing a barometer of issues and concerns. The TAC will provide input on study designs, data interpretation, and development and prioritization of restoration approaches giving consideration to the issues and concerns identified by the Stakeholder Group. In addition, three public workshops will be conducted.

Developing the restoration plan will require an understanding of existing physical and ecological conditions and processes in the corridor and of how these conditions and processes can be improved within existing physical, social, institutional, and infrastructural constraints. Phase II of the project includes the following tasks: (1) identify social, institutional, infrastructural and legislative opportunities and constraints; (2) develop a current, georeferenced map of channel and floodplain information; (3) develop a quantitative understanding of hydrology, channel morphology, and sediment supply and transport; (4) assess floodway constriction by levees and agricultural/urban encroachment; (5) assess and map current riparian vegetation and wetlands; (6) integrate biological information from California Department of Fish and Game and Merced Irrigation District studies; and (7) identify and predict geomorphically functional channel and floodplain morphology. These baseline evaluations will incorporate continuing input from the Stakeholder Group and TAC. The information collected will provide a foundation for definition of issues and restoration needs by these groups.

Phase III focuses on synthesizing information developed in Phase II to develop a Merced River corridor restoration and monitoring plan. During this phase, the Project Team will work closely with the Stakeholder Group and TAC to develop a restoration vision for the Merced River corridor, identify and prioritize restoration actions, and develop funding proposals for five of the highest priority restoration projects.

Peer review of study designs and analyses and restoration and monitoring recommendations will

be provided by a Scientific Advisory Team, consisting of internationally recognized experts in the fields of geomorphology, hydrology, aquatic and riparian ecology, and statistics.

Anticipated completion time is 22 months.

JUSTIFICATION FOR PROJECT AND FUNDING BY CALFED: The Merced River sediment supply, flow regime, and floodway and channel morphology have been significantly altered, resulting in loss and degradation of habitat for native species, particularly chinook salmon. Despite general recognition of the degraded condition of the Merced River, no long-term restoration strategy has been developed for the Merced River corridor. This project proposes to develop a long-term, large-scale restoration and monitoring program that will identify and restore critical geomorphic and ecological processes that create and maintain healthy riverine ecosystems. Such a strategy will ensure the continuing long-term effectiveness of site-specific restoration projects and provide long-term benefits to ecosystem processes, riverine habitats, and native species.

BUDGET COSTS AND THIRD PARTY IMPACTS: The estimated total cost of Phases II and III of the project is $482,252. The estimated cost of Phase I is $26,552. Funding for this phase is anticipated to be provided by AFRP.

The proposal includes coordination with stakeholders, agencies, and the public to ensure that all potential third party impacts are identified and avoided.

APPLICANT QUALIFICATIONS: The Project Team is composed of the Merced County Planning and Community Development Department and three consulting firms specializing in geomorphic and ecological analyses and public coordination and having experience in design and implementation of restoration projects in the San Joaquin Basin. The project team also includes a Scientific Advisory Team, as described above.

MONITORING AND DATA EVALUATION: The restoration plan will include river-wide and project-specific monitoring programs to evaluate the effectiveness of proposed restoration actions. The Project Team is experienced in developing focused, cost-effective and scientifically sound monitoring programs for stream restoration projects, integrated natural resource management plans, and habitat conservation plans. McBain and Trush and Stillwater Sciences are currently working to develop and implement long-term monitoring on the Tuolumne River.

LOCAL SUPPORT/COORDINATION WITH OTHER PROGRAMS/COMPATIBILITY WITH CALFED OBJECTIVES: This project will provide baseline information and restoration strategies to address ERPP Implementation Objectives related to restoration of hydraulic conditions, sediment regimes, and channel, riparian and floodplain conditions necessary to reestablish geomorphic processes and create and sustain habitat for fish, wildlife, and plant communities. The Project Team has coordinated closely with Merced Irrigation Disitrict and their fisheries consultant to develop a study approach that complements their 10-year aquatic resources study program, allows for mutual, collaborative feedback, and provides a strong foundation for restoring ecological and geomorphic processes in the Merced River corridor.